ANALYSIS FACTORS THAT EFFECT ON WILLINGNESS TO PAY OF BPJS Kesehatan INSURANCE IN DENPASAR CITY

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ABSTRACT
The objectives to be achieved in this study are to 1) analyze the value of willingness to pay BPJS Kesehatan contributions per class in Denpasar City, 2) to analyze the effect of education, type of work, income, and number of family members simultaneously on the willingness to pay BPJS Kesehatan contributions, 3) to partially analyze the effect of education, type of work, income, and number of family members on the willingness to pay BPJS Kesehatan contributions, and 4) to analyze the role of the number of family members in moderating the effect of income on BPJS Kesehatan willingness to pay in Denpasar City. This research was conducted in the city of Denpasar. The number of samples taken is 100 Non PBI participants of BPJS Kesehatan. Data analysis techniques used in this study are the Contingent Valuation Method and Moderated Regression Analysis. The results of this study state that 1) The value of willingness to pay BPJS Kesehatan contributions per class above the stipulated fee, 2) Education, type of work, income, and number of family members simultaneously and significance influence on the willingness to pay BPJS Kesehatan contributions 3) Education does not partial effect on the willingness to pay BPJS Kesehatan contributions, 4) Formal workers do not have the willingness to pay higher than informal workers, 5) Income has a positive and significant effect on the willingness to pay BPJS Kesehatan contributions, 6) Number of Family Members has a negative and significant effect on willingness to pay BPJS Kesehatan contributions, and 7) The number of family members strengthens the effect of income on the willingness to pay BPJS Kesehatan contributions in the City of Denpasar.

KEYWORDS: willingness to pay, education, type of work, income of the number of family members.

1. INTRODUCTION
BPJS Kesehatan is an institution formed by the government to provide equitable health social insurance to all Indonesian people which ensures that the basic needs of public health are met. The existence of this institution is certainly the way the government through public services to channel the JKN program mandated by the Act. In doing so, the people who are BPJS participants are obliged to fulfill their obligations and get their rights as participants.

Denpasar City is the only city in the Province of Bali. Denpasar City has the largest number of Non PBI BPJS Kesehatan participants and the most complete health facilities at all levels compared to other districts in Bali. One of them is Sanglah General Hospital which is the largest hospital and is a referral center hospital in Bali, located in Denpasar City. The highest number of Non-PBI
membership among other districts should indicate the high expectations and needs of the community for the JKN program. In addition, Denpasar City with complete and scattered facilities in Denpasar City, the community feels that this government program is serious and really facilitates the community to seek treatment using BPJS because access to health services is easier. Because the more complete and better the facilities provided will increase the satisfaction of BPJS participants (Apriyani and Sunarti, 2017). So the community is expected to have a higher willingness to pay / WTP.

During 2018, BPJS Kesehatan had arrears of up to 9 trillion to hospitals (Detik Finance, 2019). Another problem is the large number of BPJS independent contribution participants in arrears. Until November 2018, the amount of arrears by BPJS participants reached 5.7 Trillion rupiahs with the largest contributor from the Non-Wage Participant group (PBPU) (Berita Satu, 2018). The total number of arrears in Bali is 197,217 people or 11 percent of all non PBI participants. Meanwhile, the highest number of arrears came from Denpasar City, amounting to 58,776 people or 12 per cents out of all Non-PBI participants of BPJS Kesehatan in Denpasar City. Another problem is that there is a discrimination of tariff between patients with and without BPJS insurance (Dewi et al, 2019).

This study analyzes the factors that influence people's willingness to pay / WTP for BPJS Kesehatan contributions in Denpasar City. Socio-economic and demographic factors are factors that influence the WTP of the community (Ndau and Tilley, 2018). Education is one of the factors that influence people's willingness to pay / WTP because the higher the education completed, the higher the knowledge and ability to absorb information so that the WTP will be higher (Machnes, 2006). Education is one of the important investments in development (Rahayu and Tisnawati, 2014). This is in agreement with research by Okyere et al (1997), Shafie and Hassali (2013), Arisanti et al. (2017) and Murti (2005) where in the study stated that education had a positive effect on the willingness to pay / WTP for health costs. Aryani and Muqorrobin (2013) in their study entitled Determinants of Willingness to Pay BPJS Kesehatan Contributions, education has a positive effect on one's WTP. The longer a person studies, the WTP will experience an increase.

Besides education, the type of work can also affect someone's WTP. The number of formal workers in Indonesia in 2016 reached 40% of the total workers (Dong and Manning, 2017). Because the people who have formal jobs as Workers Receiving Wages for State Administrators or Civil Servants, the Indonesian National Armed Forces are deducted directly through monthly salaries of 5% for one family's dependents paid by the government by 3% and participants 2%. However, people who work in the informal sector will be charged independent tuition fees according to the class they take. The more secure one's job and the higher the income derived from stable employment, the WTP of the community will increase. This is in line with research by Widiastuti (2014) where the type of work has a positive effect on WTP. Based on research by Azhar et al (2018) states that employment is a potential factor that determines a person's WTP, where 70.3% of farmers are not willing to pay health contributions in Malaysia.
Income is a very important factor in determining people's willingness to pay. Because, without income, there will be no consumption. The higher the income, the portion of consumption will also be higher or it can be said that the relationship between income and consumption is unidirectional (Sukirno, 2005: 139). Based on research by Emalia and Huntari (2016), education and income have a positive and significant effect on the willingness to pay / WTP for a service. According to research conducted by Shafie and Hassali (2013), income influences the willingness to pay / WTP for health insurance in Penang, Malaysia. In addition, research by Gidey (2019) states that as income increases, the willingness to pay / WTP for health insurance also increases.

Family is the smallest socio-economic unit (Wiratri, 2018). The family is also a social element (Qibthiyyah and Utomo, 2016). Income obtained by the family is not only used to meet the needs of one person but all family members, the number of family members also affects income. The more the number of family members who work, the higher the income. The more the number of family members, the greater the burden of dependents to meet the needs. Indonesian people do not yet have minded insurance, and this causes Indonesian people to think insurance is not a priority in the needs that must be owned, and the more family members the expenditure for needs that are felt. Nostratnejad et al (2014) in their research in Iran and Dror et al (2007) in their research in India stated that the number of family members had a negative and significant effect on the willingness to pay for social health insurance.

The objectives of this research are:

1) To analyze the value of people's willingness to pay / WTP for BPJS Kesehatan contributions per class in Denpasar City.
2) To analyze the effect of education, type of work, income, and number of family members simultaneously on the willingness to pay BPJS Kesehatan contributions in the city of Denpasar.
3) To partially analyze the effect of education, type of work, income, and number of family members on the willingness to pay BPJS Kesehatan contributions in Denpasar City.
4) To analyze the role of the number of family members in moderating the effect of income on the willingness to pay BPJS Kesehatan contributions in the city of Denpasar.

2. METHODS
This research was conducted in Denpasar City. The reason for choosing Denpasar as the location is because Denpasar City has the highest number of Non PBI participants of BPJS Kesehatan with the most complete access to health facilities and the highest number of arrears participants compared to other districts in Bali Province.

The quantitative approach used in this research is to use a survey method. In survey research, information is collected from respondents using a questionnaire. Generally survey research is limited to research where data is collected from a sample of the population to represent the entire population.
This research will be carried out using a structured questionnaire related to the characteristics of respondents and respondents' assessment of the willingness to pay / WTP for insurance contributions BPJS Kesehatan in the City of Denpasar. The number of sample in this research is 100 Non PBI participants of BPJS Kesehatan chosen using proportionate stratified random sampling. The analysis technique used is the MRA (Moderated Regression Analysis) test and the Contingent Valuation Method (CVM) analysis.

Operational Definition of Variables

1) **Willingness to pay / WTP (Y)** is the amount of contributions that the community is willing to pay for BPJS Kesehatan services in Denpasar City. Willingness to pay / WTP in this study is expressed in rupiah (Rp).

2) **Education (X1)** is the level of formal education that has been completed or in accordance with education standards according to BPS. Education in this study was measured in year of success.

3) **Type of work (X2)** is a type of work carried out by someone who is divided into two sectors, namely formal sector workers and informal sector workers. In this research the data is changed to dummy where 'formal sector' is given a value of 1 and 'informal sector' is given a value of 0.

4) **Income (X3)** is the average household income not only sourced from the head of the household, but the total total income received in a household in one month for the past 6 months. This variable is measured in rupiah (Rp).

5) **Number of family members (M)** is the number of people in a family that are the responsibility of the head of the family. The number of family members in this study is indicated by a number of people.

3. **RESULTS**

*Estimating the Value of Willingness to pay BPJS Kesehatan Contributions in Denpasar City*

The estimated results of the average and total value of Willingess to pay/WTP BPJS contributions in Denpasar City per class using Contingent Valuation Method are as follows.

<table>
<thead>
<tr>
<th>Service Class of BPJS</th>
<th>Population</th>
<th>Average WTP (rupiah)</th>
<th>Total WTP (rupiah)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Class 1</td>
<td>185.402</td>
<td>83.224</td>
<td>15.429,896,048</td>
</tr>
<tr>
<td>Class 2</td>
<td>244.789</td>
<td>51.040</td>
<td>12.494,030,560</td>
</tr>
<tr>
<td>Class 3</td>
<td>58.041</td>
<td>25.792</td>
<td>1.496,993,472</td>
</tr>
</tbody>
</table>

Source: *Primary data processed, 2019*

Based on the estimated results of the average WTP per class of respondents for BPJS Kesehatan contributions, it can be seen that the average WTP for each class is above the premium set by the government. In this study, there are factors that affecting the willingness to pay of BPJS Kesehatan...
in Denpasar City. In this study, education (X1), type of work (X2), income (X3), and number of family members (M) are factors affecting the willingness to pay of BPJS Kesehatan in Denpasar City. Based on the results of data processing using Eviews, it can be seen the relationship between variables in this study using Moderated Regression Analysis (MRA). The results are presented in Table 2.

**Table 2. Moderation Regression Analysis Results**

<table>
<thead>
<tr>
<th>Effect</th>
<th>Standardized Coefficients</th>
<th>Std. error</th>
<th>Probability t</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>X1 → Y</td>
<td>0.7380</td>
<td>0.6253</td>
<td>0.2409</td>
<td>Not Significant</td>
</tr>
<tr>
<td>X2 → Y</td>
<td>-10.3395</td>
<td>4.4833</td>
<td>0.0233</td>
<td>Significant</td>
</tr>
<tr>
<td>X3 → Y</td>
<td>9.1658</td>
<td>1.9223</td>
<td>0.0000</td>
<td>Significant</td>
</tr>
<tr>
<td>M → Y</td>
<td>-2.6564</td>
<td>2.4882</td>
<td>0.0288</td>
<td>Significant</td>
</tr>
<tr>
<td>X3M → Y</td>
<td>8.6642</td>
<td>4.08E7</td>
<td>0.0323</td>
<td>Significant</td>
</tr>
</tbody>
</table>

Source: *Primary data processed, 2019*

Information

X1 = Education  
X2 = Type Of Work  
X3 = Income  
M = Number of Family Members  
Y = Willingess to Pay BPJS Kesehatan Contributions

From the summary of moderated regression analysis result shown in Table 2, the structural equation is stated as follows.

\[ Y = \alpha + \beta_1X_1 + \beta_2X_2 + \beta_3X_3 + \beta_4M + \beta_5X_3M + \mu \]

\[ Y = 2.1622 + 0.7380X_1 - 10.3395X_2 + 9.1658X_3 - 2.6564M + 8.6642X_3M \]

\[ R^2 = 0.8371 \quad F = 96.6083 \quad \text{Prob. F-statistic} = 0.0000 \]

4. DISCUSSION

*The Effect of Education, Type of Work, Income, and Number of Family Members on Willingness to pay / WTP BPJS Kesehatan Contributions in the City of Denpasar (Y)*

Based on the results of data processed with Eviews, the probability value is \(0.000 \leq 0.05\), this means that H0 is rejected and H1 is accepted. This means that education (X1), type of work (X2), income (X3), and number of family members (M) simultaneously influence the willingness to pay BPJS Health contributions in Denpasar City.
The Effect of Education on Willingness to pay / WTP BPJS Kesehatan Contributions in the City of Denpasar (Y)

Probability value of 0.2409 > 0.05, this means that H0 is accepted and H1 is rejected. This means that education (X1) does not have a positive and partially significant effect on the willingness to pay BPJS Kesehatan contributions in the city of Denpasar. The insignificant effect of education on the willingness to pay BPJS Kesehatan contributions in this study is not in line with research conducted by Aryani and Muqorrobin (2013) which states that the latest education level has a positive and significant effect on the willingness to pay BPJS Kesehatan contributions and research by Binam et al (2002) which states that the level of education is one of the factors influencing someone to want to pay some funds for health services. The insignificant level of education in this study shows that there are other factors that are more influential on the willingness to pay BPJS Kesehatan contributions in the city of Denpasar. The insignificant effect of education on the willingness to pay BPJS Kesehatan contributions in this study is not in line with research conducted by Aryani and Muqorrobin (2013) which states that the latest education level has a positive and significant effect on the willingness to pay BPJS Kesehatan contributions and research by Binam et al (2002) which states that the level of education is one of the factors influencing someone to want to pay some funds for health services. The insignificant level of education in this study shows that there are other factors that are more influential on the willingness to pay BPJS Kesehatan contributions in the city of Denpasar.

The level of education has a close relationship with the breadth of insight and knowledge possessed by someone. Because the higher the level of one's education, the ability to absorb information will be higher (Ni'mah and Muniroh, 2015). A person's willingness to pay is influenced by many demographic and socio-economic factors such as age, gender, ethnicity, marital status, socio-economic status such as education level, occupation, income, community behavior, community perceptions of health services, previous health insurance membership and the level of public health itself (Akhter and Larson, 2010).

The Effect of Type of Work (X2) on Willingness to pay / WTP BPJS contributions in the City of Denpasar (Y)

Probability value of 0.0233 < 0.05 with β2 value of -10,33957 < 0 this means that H0 is accepted and H1 is rejected. This means that the type of formal sector work partially does not have the willingness to pay / WTP BPJS contributions in Denpasar City which is higher than the type of informal work. The education type regression coefficient (X2) of -10,33395 means that formal workers have a willingness to pay lower 10,33957 thousand rupiah or Rp10,333,57 compared to informal workers assuming other variables are constant. In Indonesia, formal workers such as civil servants (PNS) and private employees whose companies have registered to take part in BPJS Kesehatan insurance in payment of contributions will be directly deducted from salary. As much as 2 percent is deducted.
from the salaries of government employees while 3 percent is borne by the government and 1 percent is deducted from the salaries of private employees and 4 percent is borne by related companies. The contribution is included for a maximum of 5 dependents, namely husband and wife and 3 children. Meanwhile, informal workers must pay dues per person according to the chosen class. This means, when compared to families who have 4 family members, the amount to be paid by informal workers is higher.

Based on the results of a survey conducted, most informal and formal workers have no objections in paying BPJS Health contributions. Because BPJS Health membership covers all people with different educational backgrounds or types of work, formal types of work do not always have the willingness to pay higher fees. The informal sector can play a role as broad employment for people with low education (Sedana Putra and Sudibia, 2018).

The Effect of Income (X3) on Willingness to pay / WTP BPJS Kesehatan Contributions in Denpasar City (Y)

Probability value of 0.000 ≤ 0.05, this means that H0 is rejected and H1 is accepted. This means that income (X3) has a positive and partially significant effect on the willingness to pay BPJS Kesehatan contributions in the city of Denpasar. The income regression coefficient (X3) of 9,16581 means that if income increases by 1 million rupiah, the willingness to pay BPJS contributions will increase by 9,16581 thousand rupiah or Rp 9,165,81 assuming the other variables are constant. The results of this study are in line with research conducted by Gidey et al (2019), Abdulganiyu et al (2018), and Aryani and Muqorrob in (2013) states that income has a positive and significant effect on willingness to pay. Because the higher the level of one's income, then they will be willing to spend extra money on health insurance.

Income is a very important factor in determining one's willingness to pay. Because without income there will be no expenditure. The relationship between income and consumption is unidirectional (Sukirno, 2005: 139). With an increase in income, the ability to meet needs will increase. Health insurance is an important requirement. Therefore, an increase in income will also increase one's ability to pay insurance premiums so that the value of WTP and opportunities for ownership of health insurance increase in line with the increase in income (Restiatun, 2014).

The Effect of Number of Family Members on Willingness to pay / WTP BPJS Kesehatan Contributions in Denpasar City (Y)

Probability value of 0.0288 ≤ 0.05, this means that H0 is rejected and H1 is accepted. This means that the number of family members (M) has a negative and significant effect on the willingness to pay BPJS Kesehatan contributions in Denpasar City. The regression coefficient of the number of family members of -2.656411 means that if the number of family members increases by 1 person, the
willingness to pay BPJS contributions will decrease by 2.656411 thousand rupiah or Rp.2656.41 assuming other variables are constant.

The number of family members has a negative influence on the willingness to pay BPJS Kesehatan contributions. This is in line with research conducted by Aryani and Muqorrobin (2013) where the number of family members has a negative influence on the willingness to pay BPJS Kesehatan contributions because BPJS Kesehatan membership is not individually, but is calculated and included per family card so that if the number of family members registered on the family card more and more, the burden of contributions every month will increase. The increased contribution burden will reduce willingness to pay (WTP) to improve BPJS Kesehatan Services Class III health. Dika et al (2019) in his research stated that there is a relationship between number of family member and WTP. However, the results of this study contradict the research conducted by Lofgren et al (2008) which states that the more the number of family members, the more willingness to pay health insurance contributions. In his research, Lofgren stated that this happened because it was to reduce the risk of being exposed to high health costs when seeking treatment.

**Moderation Variable Hypothesis Test**

Probability value of 0.0323 <0.05, this means that H0 is rejected and H1 is accepted. This means that the number of family members (M) as a moderating variable strengthens the effect of income on BPJS Kesehatan contributions in Denpasar. The regression coefficient of income interaction variables and the number of family members of 8.664233 means that with the increase in the number of family members, the effect of income on BPJS contributions will increase by 8.664233 thousand rupiah or Rp 8,664.23 assuming other variables are constant. In other words, the variable number of family members strengthens the effect of income on BPJS Kesehatan contributions in Denpasar. The results of the moderation regression analysis with regard to the direct influence of moderating variables, in this case β4 is significant and the interaction between the independent variables and β5 moderating variables is significant. Then obtained the type of moderation is Quasi Moderator. Quasi moderator is a variable that moderates the relationship between the independent variable and the dependent variable as well as being the independent variable (Suyana Utama, 2016: 147).

The number of family members is significant as a moderating variable because the more family members, especially those who have entered the age of the workforce, the higher the family income will be. This is because more and more family members who are already working will contribute the income of these family members to family income. This is in line with research conducted by Dewi (2012) where the number of children has a positive and significant effect on family income.

This is also in line with the opinion of Simanjuntak (2001: 55) which states that the large number of family members in a family without being followed by an increase in economic terms will require family members other than the head of the family to make a living. Thus, the number of family
members followed by an increase in family income will increase the willingness to pay of BPJS Kesehatan contributions.

5. CONCLUSION
The achievement of Universal Health Coverage (UHC) is an important issue which Indonesia has committed to realize through the National Health Insurance program organized through the Social Security Organizing Agency (BPJS). Indonesia is targeting the achievement of UHC by 2019. Denpasar City by the end of 2019 had reached 95.07% membership. Through this high participation, it is expected that community support and participation in maintaining the sustainability of the BPJS Kesehatan in Denpasar City.

The focus of this research is to find out how much the community's willingness to pay for BPJS Kesehatan contributions in Denpasar City and how socio-economic and demographic factors such as education, type of work, income, and number of family members affect the willingness to pay the community in Denpasar City. Based on data obtained through questionnaires to respondents about how much they are willing to pay BPJS Kesehatan contributions, it is found that the average community WTP in the City of Denpasar has exceeded the stipulated fees. This means, the average community has supported the JKN program organized by the BPJS Kesehatan.

The results of this study are education, type of work, income, and the number of family members simultaneously influencing the willingness to pay BPJS Kesehatan contributions. This means that the willingness to pay the community in Denpasar for BPJS Kesehatan contributions is indeed influenced by socio-economic and demographic factors such as education, type of work, income, and number of family members.

The results of the partial influence test in this study are that education do not significantly influence the willingness to pay BPJS Kesehatan contributions in Denpasar City. This is because, the willingness to pay the community is calculated per family, so that although the respondents are not highly educated and work informally, if they have high family income and high awareness of the importance of the BPJS Kesehatan program, then their willingness to pay will also be high.

People who work in the informal sector have a higher willingness to pay BPJS Kesehatan contributions compared to formal sector workers. Informal sector workers who have non-permanent income feel more willing to pay BPJS Kesehatan contributions in order to avoid expensive medical costs if they are not covered by having health insurance such as BPJS Kesehatan whose contributions are fairly mild and cover almost all types of health services. It is hoped that the socialization of the government to the public on the importance of health insurance and BPJS Kesehatan, especially people who have low levels of education and have a non-permanent income can get more knowledge and awareness of the importance of having BPJS Kesehatan insurance.
Income also determines the level of household consumption (Saraswati, 2018 and Hardiani et al., 2017). Income has a positive and significant impact on the willingness to pay of BPJS Kesehatan contributions in Denpasar City. This is because, the higher the income, the proportion of income used for food and non-food needs including health costs will also be even greater. People who have high incomes do not feel burdened by spending to pay for health insurance, because their basic needs such as food needs can be adequately met. Thus, their ability to set aside income will be higher which will then increase their willingness to pay BPJS Kesehatan contributions. For people who have low incomes, especially for those who are less fortunate, can register themselves as participants of PBI (Recipient of Donation Assistance).

The number of family members has a negative and significant relationship to the willingness to pay BPJS Kesehatan contributions. This is because, the more the number of family members, the burden of contributions that must be issued will be more and more because BPJS Kesehatan contributions are calculated per family card. With the higher burden of expenditure, the willingness to pay BPJS Kesehatan contributions will be lower. From the survey conducted, not all family members are registered as BPJS Kesehatan participants. The government and BPJS Kesehatan management are deemed necessary to update the number of family members in an update, especially those with a large number of family members so that they can be entirely covered with BPJS Kesehatan and minimize arrears because of the burden of high contribution fees. For hospitals, clinics, health centers, and other health facilities to pay more attention to the services provided to participants because each participant has paid with family dependents.

The number of family members is able to moderate and strengthen the effect of income on BPJS Kesehatan contributions. This means, the more family members, the influence of income on BPJS Kesehatan contributions will be higher. This is because, many of the family members other than the head of the family have a job and contribute to family income. So even though the number of family members is high, in terms of their economy followed by an increase in income so that the willingness to pay BPJS Kesehatan contributions also increases. Hopefully, providing incentives and training can increase the role of all family members to increase family income so that family welfare can be achieved.

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